

WHAT IS CLAIMED IS:

1. A method for preparing a substrate for hybridization, the method comprising:

positioning a porous layer on the substrate; and

collapsing a moat in the porous layer with a laser,

wherein the moat is adapted to bound a portion of the porous layer on which an array can be positioned.

2. The method of claim 1, wherein the collapsing occurs without heating the porous layer.

3. The method of claim 1, wherein the porous layer comprises nylon.

4. A method for manufacturing, comprising:

providing a substrate comprising a porous layer, wherein the porous layer is adapted for depositing an array;

providing a laser assembly, wherein the laser assembly comprises laser; and

collapsing the moat in the porous layer with the laser.

5. The method of claim 4, wherein laser assembly further comprises at least one of a linear actuator and a galvanometer scan assembly.

6. A method for preparing a hybridization chamber, comprising:

providing a substrate comprising a porous layer with a moat collapsed with a laser;

positioning an array on a portion of the porous layer bound by the moat; and

positioning a gasket in the moat to provide a nonporous seal.

7. An apparatus for preparing a hybridization substrate, comprising:  
  
a laser assembly adapted to collapse a moat in a porous layer on the substrate; and  
  
a galvanometer scan assembly adapted to position laser light from the laser assembly on the porous layer.
8. The apparatus of claim 7, further comprising a thermal path on a bottom portion of the apparatus.
9. The apparatus of claim 7, further comprising a linear actuator.
10. The apparatus of claim 7, further comprising a vacuum head.
11. The apparatus of claim 10, wherein the vacuum head is positioned adjacent to the galvanometer scan assembly.
12. A laser assembly, comprising:  
  
a laser adapted to collapse a moat in a porous layer of a hybridization substrate;  
  
a mechanism to position the laser light on a portion of the porous layer.
13. The laser assembly of claim 12, wherein the mechanism comprises at least one of a linear actuator and a galvanometer scan assembly.
14. A substrate for hybridization, comprising:  
  
a porous layer, wherein the porous layer is adapted for depositing an array;  
and  
  
a moat in the porous layer, wherein the moat is collapsed by laser.
15. The substrate of claim 14, further comprising an array.

16. The substrate of claim 15, further comprising a hybridization fluid.

17. An apparatus for preparing a substrate for hybridization comprising means for providing a moat in a porous layer on a substrate by laser means, wherein the porous layer is adapted for depositing an array.

18. The apparatus of claim 17, wherein the means for providing a moat comprise means for positioning the laser means.

19. The apparatus of claim 17, further comprising means for spotting the array on the substrate.

20. A system for automated preparation of substrates for hybridization comprising:

a first linear actuator to position a laser assembly, wherein the laser assembly comprises a laser and a galvanometer scan assembly, wherein the galvanometer scan assembly is mounted on a second linear actuator, and

a third linear actuator to position a slide holder.

21. The system of claim 20, further comprising a fourth linear actuator to position a spotting head.

22. The system of claim 20, further comprising a camera to inspect a moat on the substrate.